

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, or listings, of claims in this application.

1. (Currently Amended) A filled halobutyl elastomer composition comprising at least one halobutyl elastomer, at least one mineral filler, wherein the mineral filler is selected from the group consisting of highly dispersed silica prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides, silicates, gypsum, alumina, titanium dioxide, talc, and mixtures thereof, and at least one protected thiol modifier.

2. (Previously Presented) The filled halobutyl elastomer composition according to claim 1 wherein the halobutyl elastomer is a Bromobutyl elastomer.

3. (Currently Amended) The filled halobutyl elastomer composition according to claim 1 wherein the mineral filler is highly dispersed silica prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides.

4. (Previously Presented) The filled halobutyl elastomer composition according to claim 1 wherein the at least one protected thiol modifier is a blocked mercaptosilane.

5. (Previously Presented) The filled halobutyl elastomer composition according to claim 1 wherein the at least one protected thiol modifier is selected from the group consisting of thioacetic acid S-trimethoxysilyl-methyl ester, thioacetic acid S-triethoxysilyl-methyl ester, thioacetic acid S-(2-trimethoxysilyl-ethyl) ester, thioacetic acid S-(2-triethoxysilyl-ethyl) ester, thioacetic acid S-(3-trimethoxysilyl-propyl) ester, thioacetic acid S-(3-triethoxysilyl-propyl) ester, thiopropionic acid S-trimethoxysilyl-methyl ester, thiopropionic acid S-triethoxysilyl-methyl ester, thiopropionic acid S-(2-trimethoxysilyl-ethyl) ester, thiopropionic acid S-(2-triethoxysilyl-ethyl) ester, thiopropionic acid S-(3-trimethoxysilyl-propyl) ester, thiopropionic acid S-(3-triethoxysilyl-propyl) ester.

triethoxysilyl-propyl) ester, thiobutyric acid S-trimethoxysilyl-methyl ester, thiobutyric acid S-triethoxysilyl-methyl ester, thiobutyric acid S-(2-trimethoxysilyl-ethyl) ester, thiobutyric acid S-(2-triethoxysilyl-ethyl) ester, thiobutyric acid S-(3-trimethoxysilyl-propyl) ester, thiobutyric acid S-(3-triethoxysilyl-propyl) ester, pentanethioic acid S-trimethoxysilyl-methyl ester, pentanethioic acid S-triethoxysilyl-methyl ester, pentanethioic acid S-(2-trimethoxysilyl-ethyl) ester, pentanethioic acid S-(2-triethoxysilyl-ethyl) ester, pentanethioic acid S-(3-trimethoxysilyl-propyl) ester, pentanethioic acid S-(3-triethoxysilyl-propyl) ester and mixtures thereof.

6. (Currently Amended) A process for preparing a filled halobutyl elastomer which comprises:

admixing at least one halobutyl elastomer, at least one mineral filler, wherein the mineral filler is selected from the group consisting of highly dispersed silica prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides, silicates, gypsum, alumina, titanium dioxide, talc, and mixtures thereof, at least one protected thiol modifier and at least one cross-linking agent; and

curing the resulting admixture to make the filled halobutyl elastomer.

7. (Currently Amended) A method for improving the abrasion resistance of a filled, cured elastomer composition comprising:

providing at least one halogenated butyl elastomer comprising at least one mineral filler, wherein the mineral filler is selected from the group consisting of highly dispersed silica prepared by the precipitation of silicate solutions or the flame hydrolysis of silicon halides, silicates, gypsum, alumina, titanium dioxide, talc, and mixtures thereof; and

admixing with said at least one halogenated butyl elastomer at least one protected thiol modifier.